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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/424,623	03/27/2000	ANTTI TOSKALA	297-009040-U	8253

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03/19/2004

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FAIRFIELD, CT 06430

EXAMINER

AHN, SAM K

ART UNIT	PAPER NUMBER
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2634

DATE MAILED: 03/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/424,623

Applicant(s)

TOSKALA ET AL.

Examiner

Sam K. Ahn

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on amendment, received on 1/26/04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-16 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims merely recite used without any active, positive steps delimiting how these use are actually practiced. Without reciting any practice, positive steps, claims 8-14 and 16 do not achieve the purpose of a method.

In claim 1, line 6, it is unclear and indefinite as to what "it" is being referred to.

In claims 2-4, line 1, respectively, recites "a reception branch" and "said reception branch" while depending on claim 1 which recites a first and second reception branch. Therefore, it is unclear and indefinite as to which reception branch claims 2-4 are reciting.

Claim 7 recites the limitation "the received signals" in line 3. There is insufficient antecedent basis for this limitation in the claim.

In claim 15, line 4 recites "and which receives...". It is unclear and indefinite as to what is being received at the certain operating frequency.

Claims 5 and 6 directly depend on claim 1.

Claim Rejections - 35 USC § 102

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1 and 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Saito.

Regarding claim 1, Saito teaches a radio apparatus and a method comprising a diversity receiver (see Fig.8) which has a first reception branch (33, 35, 38, 39, 42 and 61) and a second reception branch (34, 44, 46, 45, 47, 48 and 62) (also note col.9, lines 7-61), a rake receiver (see Fig.6 and note col.8, lines 13-30) comprising correlator branches (840~84n) for combining received signal components on baseband frequency, and a measuring receiver for making measurements (63, receiving and measuring electric field intensity, note col.10, lines 16-36), characterized in that it is arranged so as to tune the first reception

branch to a different frequency than the second reception branch and to make measurements of a signal produced by one reception branch simultaneously with the reception of a signal produced by the other reception branch. (note col.9, lines 7-61 wherein the first and second branches pass only first and second frequency, respectively, simultaneously measure the received signal)

Regarding claim 6, Saito teaches all subject matter claimed, as applied to claim 1. Saito further teaches a common oscillator to produce the IF mixing frequencies needed for tuning all the reception branches as well as frequency conversion means to convert in each reception branch the frequency produced by said common oscillator to an IF mixing frequency suitable for tuning. (see 36 in Fig.8)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kondo in view of Yugawa.

Regarding claim 15, Kondo teaches a method for making frequency specific measurements in a diversity receiver which comprises at least two reception branches (15-19 and 15-21 in Fig.7) and a rake receiver (15, 21) including correlator branches (131 ~ 13n) and which receives signals at a certain operating frequency, characterized in that to make measurements at other than the operating frequency carried out by a measuring block (21) in the rake receiver is interrupted and said measuring block is set to carry out a measurement at other than the operating frequency. The measuring block, or reception level measuring section when switching between radio zones (as shown in Fig.8) using f_1 and f_m frequencies. Therefore, it is inherent that the terminal in radio zone A moving into radio zone B or C would handoff and switch to a different operating frequency (for ex. from f_1 to f_m or from f_m to f_1). The measuring block calculating the reception level of the pilot channels would switch from its operating frequency to a new frequency, which may be the potential operating frequency (note col.2, lines 47-57). However, Kondo does not explicitly teach wherein the measuring block calculates the impulse response of the received signal, Yugawa teaches this limitation. Yugawa teaches wherein output of a correlator, outputting an impulse response, is coupled to a path detector calculating received power level. (see Fig.4) Therefore, it would have been obvious to one skilled in the art at the time of the invention to analyze that Kondo's teaching of the terminal with correlators with correlator, 13n, coupled to the measuring block calculates the reception level based on the impulse responses from the correlators for the

purpose of properly detecting the signal received by detecting the symbols from the impulse response measurement, as shown in Fig.9A~9D of Yugawa.

Allowable Subject Matter

5. Claims 2-5, 7-14 and 16 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.
6. The following is a statement of reasons for the indication of allowable subject matter:
Present application discloses a diversity receiver comprising rake receiver and a measuring block in the rake receiver for measuring impulse response of the signal received. Prior arts, Saito, Kondo and Yugawa, teach in the same field of endeavor, comprising common elements recited. However, prior art do not teach or suggest in combination of the reception branches comprised in a certain configuration with all the elements of filters, mixers, and a switch.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Sam Ahn** whose telephone number is **(703) 305-0754**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Stephen Chin**, can be reached at **(703) 305-4714**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
P.O. Box 1450
Alexandria, VA 22313-1450

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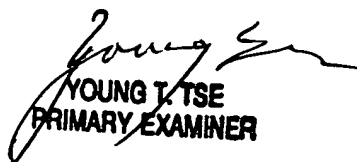
or faxed to:

(703) 872-9306

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Sam K. Ahn
3/11/04


YOUNG T. TSE
PRIMARY EXAMINER